

Patent Abstracts of Japan

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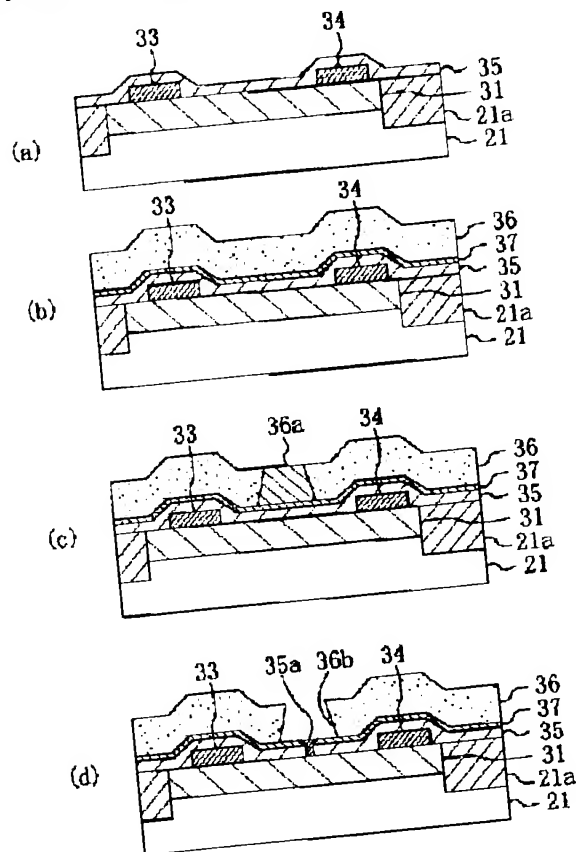
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TITLE : SEMICONDUCTOR DEVICE AND  
FABRICATION THEREOF



ABSTRACT : PROBLEM TO BE SOLVED: To obtain a good forward taper at the leg of a gate electrode such that the diameter is increased at the top side part, while high throughput and high stability are attained when a T-type gate electrode having a top part and a leg part extending downward therefrom is formed.

SOLUTION: A resist film 35 with about 200 nm thickness of PMMA (polymethyl methacrylate) for EB(electron beam) exposure is applied on a substrate 21, and an upper layer resist film 36 for i-line exposure is applied onto the lower layer resist film 35. A mixing layer 37 of both resist films is then formed on the interface between the upper and lower resist films 36, 35. The upper layer resist film 36 is then developed by the i-line exposure, except for the region 36a for forming the top part to obtain an upper layer opening 36b. Furthermore, the mixing layer 37 and the leg part forming region 35a of the layer resist film 35 are developed through EB exposure to obtain a lower opening 35b having a forward taper.

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